25X1 [redacted]

25X1 [redacted]

PAR 213

8 Sept 64

SUBJECT: Color Reproduction Systems Review

TASK/PROBLEM

1. In view of the recent importance attached to color photography by the intelligence community, investigate and determine the most suitable means to reproduce and utilize multiple copies of color materials. Determine the most suitable reproduction system and types of equipment to be used in all phases of the reproduction cycle. Also, attempt to define how color photography can best be utilized by the photo interpreter.

DISCUSSION

2. Evaluation effort on transparencies, reflection prints, and enlargements in the previous quarter indicated which duplicating systems were more promising. However, verification was needed from tests on a good high altitude color original.

3. A review of progress with the customer representative at the close of the quarter confirmed the above needs and resulted in a request to delay delivery of demonstration material. Consequently, only the planning and design of this material to facilitate coverage by briefing boards, projection slides, and Vu-Graph aids was accomplished.

4. In mid-August, a high altitude color acquisition was received and satisfactorily processed. The original material used was [redacted] Special Color Film, Type SO-121, on 70mm Estar thin base. 25X1

PAR 213

8 Sept 64

5. Work has been intensive since receipt of the acquisition and, to date, the following tests have been conducted:

a. Printing and processing of color and black-and-white duplicates on materials which showed promise in earlier work.

(1) Color:

(a) Duplicating back onto SO-121 material.

25X1 (b) [redacted] Internegative and Print Films.

(2) Black-and-White:

25X1 (a) [redacted] Panatomic-X Aerial Film, Type 4400 (Estar Thin Base) negatives (a panchromatic film).

25X1 (b) [redacted] Fine Grain Aerial Duplicating Film, Type 8430 (a blue-sensitive film).

b. White light printing on Type 4400.

c. Color separation printing on Types 4400 (Black-and-White) and SO-121 (Color).

d. Subtractive printing on the [redacted] internegative and Type SO-121 films. 25X1

e. Additive printing on Type SO-121.

f. Enlargements equivalent to 5X, 10X, and 20X on the [redacted] print film. 25X1

6. The tests made are just now at the stage where evaluation work can produce answers for resolution and color balance. Results appear to bear out our expectations for the selected systems. Some of the duplicates look very good, especially those from the additive printing technique on SO-121. More definitive information on duplicating should be possible in a matter of two to three weeks.

PAR 213

8 Sept 64

PLANNED ACTIVITIES

7. Continue the evaluation of test duplicates and report results.

8. Attempt to determine the most suitable systems in accordance with the TASK/PROBLEM objectives.

9. Complete the preparation of briefing aids requested by the customer representative.